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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,523	12/11/2000	Robert J. Collins	RS001US	4627

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EXAMINER

JONES, SCOTT E

ART UNIT	PAPER NUMBER
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3713

DATE MAILED: 04/22/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/734,523

Applicant(s)

COLLINS, ROBERT J.

Examiner

Scott E. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 124-146 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 124-146 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 18, 2003 has been entered.

Response to Amendment

2. This office action is in response to the amendment/RCE filed on February 18, 2003 in which applicant cancels claims 62-123, adds claims 124-146, and provides comments regarding the prior art of record.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 124, 127, 134, 136, and 138 are rejected under 35 U.S.C. 102(b) as being anticipated by Teder (U.S. 5,700,204).

Teder discloses an apparatus and method for determining parameters of motion regarding a struck projectile (golf ball). Teder utilizes a Doppler microwave speed sensor to measure the apparent speed of a struck golf ball, along with determining other parameters relating to the projectile. Teder additionally discloses:

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Regarding Claims 124, 134, and 138:

- aligning a plurality of electro-magnetic energy transmission paths to be non-parallel to the objects substantially non-curvilinear movement path section (10) (Abstract, Column 7, lines 37-43, and 60-63, Column 8, lines 19-22, Column 9, lines 6-8, Column 22, lines 60-62, Figs. 1 and 16);
- reflecting electro-magnetic energy from each of the plurality of transmission paths off the object for at least a portion of the substantially non-curvilinear movement path section (Abstract, Column 10, lines 12-43, Column 20, line 9-Column 21, line 48, and Figs. 1, 4, and 16);
- receiving the electro-magnetic energy reflected off the object from each of the plurality of transmission paths (Abstract, Column 10, lines 12-43, Column 20, line 9-Column 21, line 48, and Figs. 1, 4, and 16);
- determining one of a movement direction, spin rate, spin axis, and spin axis orientation of the object based on the reflected electro-magnetic energy received from each of the plurality of transmission paths and while the object was traveling in the at least a portion of the substantially non-curvilinear movement path section (Abstract, Column 10, lines 12-43, Column 20, line 9-Column 21, line 48, Column 23, lines 26-35, and Figs. 1, 4, and 16).

Regarding Claims 127, 134, 136, and 138:

- the object is a golf ball and the substantially non-curvilinear movement path section is located within several feet of the location where the golf ball is struck (Column 8, lines 32-33, and Column 21, lines 45-48).

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 125, 126, 128-133, 135, 137, and 139-146 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teder (U.S. 5,700,204) in view of Mihran (U.S. 6,244,971).

Teder discloses that as discussed above regarding claims 124, 127, 134, 136, and 138.

Teder discloses all the claimed subject matter except for:

Regarding Claims 125, 130, 135, and 139:

- applying an electromagnetic contrasting mark to the object.

Regarding Claims 126 and 131:

- applying a symmetrically shaped electro-magnetic contrasting mark to the object.

Regarding Claim 132:

- applying a plurality of electro-magnetic contrasting marks to the object.

Regarding Claim 133:

- applying a plurality of symmetrically shaped electro-magnetic contrasting marks to the object.

Regarding Claims 141, 144, 145, and 146:

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- a symmetrically shaped area having an electro-magnetic contrast different from the ball remainder.

Regarding Claim 142:

- the ball including a plurality of symmetrically shaped areas where the areas are non-overlapping.

Regarding Claim 143:

- the plurality of areas have a circular shape.

Mihran, like Teder, teaches of a method and apparatus for determining characteristics about a struck projectile, such as a golf ball or baseball and is therefore analogous art. Mihran, like Teder, also teaches of reflecting electro-magnetic waves off of a golf ball to determine flight characteristics, however, Teder's sensors/receivers send and receive signals non-parallel to the projected path of the golf ball, whereas, Mihran's sensor/receiver sends and receives signals parallel to the projected path of the golf ball. Mihran additionally teaches:

Regarding Claims 125, 130, 135, and 139:

- applying an electromagnetic contrasting mark to the object (Abstract, Figs. 3, 5, 7, Column 2, lines 42-52, Column 3, lines 15-20, and 58-61, Column 7, lines 9-31, Column 8, lines 13-26, and Column 10, lines 5-29).

Regarding Claims 126 and 131:

- applying a symmetrically shaped electro-magnetic contrasting mark to the object (Column 8, lines 13-26).

Regarding Claim 132:

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- applying a plurality of electro-magnetic contrasting marks to the object (Abstract, Figs. 3, 5, 7, Column 2, lines 42-52, Column 3, lines 15-20, and 58-61, Column 7, lines 9-31, Column 8, lines 13-26, and Column 10, lines 5-29).

Regarding Claim 133:

- applying a plurality of symmetrically shaped electro-magnetic contrasting marks to the object (Column 8, lines 13-26) .

Regarding Claims 141, 144, 145, and 146:

- a symmetrically shaped area having an electro-magnetic contrast different from the ball remainder (Abstract, Figs. 3, 5, 7, Column 2, lines 42-52, Column 3, lines 15-20, and 58-61, Column 7, lines 9-31, Column 8, lines 13-26, and Column 10, lines 5-29).

Regarding Claim 142:

- the ball including a plurality of symmetrically shaped areas where the areas are non-overlapping (Abstract, Figs. 3, 5, 7, Column 2, lines 42-52, Column 3, lines 15-20, and 58-61, Column 7, lines 9-31, Column 8, lines 13-26, and Column 10, lines 5-29) .

Regarding Claim 143:

- the plurality of areas have a circular shape (Column 7, lines 11-15).

It would have been obvious to one having ordinary skill in the art, at the time of the applicant's invention, to incorporate the electro-magnetic contrast features of Mihran in Teder. One would be motivated to use Mihran's contrasting marks in Teder because two or more symmetrical contrast areas on the ball increases the number of pulses generated while the

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transmitted radiation intersects the flight path of the ball. This is of particular advantage where the transceiver is of relatively low power with a limited sensing range because a greater number of pulses are obtained within the same portion of the ball's flight path.

Response to Arguments

7. Applicant's arguments with respect to claims 62-123 have been considered but are moot in view of the cancellation of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott E. Jones whose telephone number is (703) 308-7133. The examiner can normally be reached on Monday - Friday, 8:30 A.M. - 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (703) 308-4119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

SEJ

sej

April 17, 2003



S. THOMAS HUGHES
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